

SPECIFICATION

page 4, paragraph 4:

An additional drawback of that previous topology is that it uses small devices to create the non-linearities; these devices have very high input and output impedances and are not easy to match to the standard 50 Ohms impedance. The pre-distorter of this embodiment of the present invention is readily matched to the standard 50 Ohms impedance; linear path 8, and non-linear path 7, are individually matched to 100 Ohms, which means that input divider 6 and output coupler 13 do not provide any impedance transformation and accordingly have a wider bandwidth. Referring now to figure 2, the circuit of a preferred embodiment of the pre-distorter 2 is shown in more detail, by way of example. The input divider comprises an inductor 16, connected in series between the terminal 1 and the non-linear path 7, the ends of the inductor 16 being connected to ground through respective capacitors 17 and 18. The inductor 16 and capacitors 17 and 18 form a tuned circuit that introduces a phase shift of $+90^\circ$ between the signal at the terminal 1 and the signal applied to the non-linear path 7. The divider 6 also comprises capacitors 19 and 20, connected in series between the terminal 1 and the linear path 8, the junction of the capacitors 19 and 20 being connected to ground through an inductor 21. The capacitors 19 and 20 and the inductor 21 are tuned to introduce a phase shift of -90° between the signal at the terminal 1 and the signal applied to the linear path 8. Accordingly, the signals applied to the paths 7 and 8 have a phase difference of 180° .